

## Alkanna Oil:

Roots from the plant *Alkana tinctoria*

### Mechanism of Action

Anti-inflammatory, antimicrobial and antioxidant properties due to alkannin, shikonin and their esters

### Efficacy and Benefits

- Modulate both inflammatory and proliferative phase of wound healing
- Promotes wound healing
- According to animal studies, it also promotes angiogenesis

## Sacha Inchi Oil:

Extracted from the Inca peanut by gently pressing the unpeeled fruit

### Mechanism of Action

Compared to other vegetable oils, Sacha Inchi Oil is characterized by a unique balanced composition of fatty acids.

Highly concentrated in Omega-3, Omega-6 and Omega-9, account up to 90% of these fatty acids.

Also, it is high in a-linolenic acid, linolenic acid, oleic acid and Vitamin E.

### Efficacy and Benefits

- Moisturizes
- Reduces TEWL
- Regenerates

## St. John's Wort Oil:

Known as 'balsam' comes from the plant *Hypericum perforatum*

### Mechanism of Action

- Increases collagen synthesis and activation of fibroblasts
- Downregulation of proinflammatory genes and inhibition of prostaglandin synthesis
- Antimicrobial and anti-inflammatory action due to the main ingredients hypericin and hyperforin

### Efficacy and Benefits

- Wound healing effect
- Antimicrobial and anti-inflammatory properties

# ●●● Biolin P<sup>®</sup> :

Is a novel prebiotic ingredient that works in harmony with the skin

## Mechanism of Action

Works as a food supplement for the friendly organism, while the harmful organism cannot digest the prebiotic.

The friendly bacteria recover and grow faster, while the harmful ones are reduced. The skin problems are reduced at the same time.

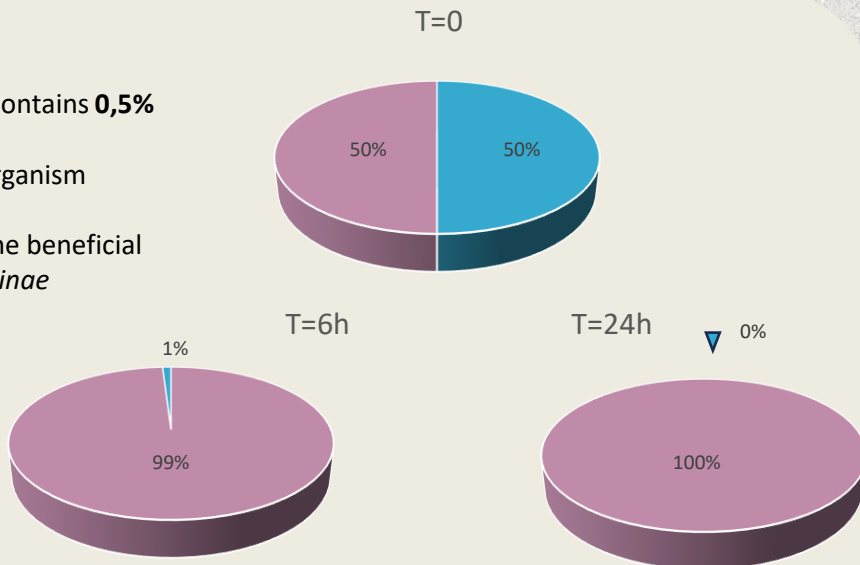
## Efficacy and Benefits

- The new and delicate skin barrier is stimulated
- Strengthens the sensitive barrier
- Increases the protective shield
- The skin flora is recovered
- Restores the skin barrier

## Clinical efficacy

Application of a product that contains **0,5% Biolin<sup>®</sup>** led to:

- reduction of the harmful organism *Staphylococcus aureus*
- Increased colonization of the beneficial organism *Micrococcus kristinae*



■ *Micrococcus kristinae* (cell/ml)

■ *Staphylococcus aureus* (cell/ml)

# ●●● ProRenew Complex CLR™:

With the regenerative power of probiotic bacteria - Restores and improves skin renewal

## Mechanism of action

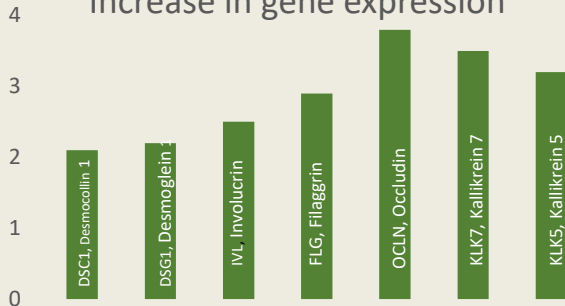
- Helps the activation in the production of caspase-14 (an enzyme essential for the maintenance of normal and healthy keratinocytes functions)
- Helps the activation of gene expression of essential gene markers for keratinocytes differentiation

## Efficacy and benefits

- Restores skin's natural health and beauty
- Fortifies skin natural barrier
- Increases the production of antimicrobial peptides
- Improves keratinocyte cohesion and growth

## Clinical efficacy

Increase in gene expression



### 1. Gene expression of differentiation-relevant markers

Normal Human keratinocytes were treated with 1% ProRenew Complex CLR for 96 hours. Gene expression values were related to non-treated control cells.

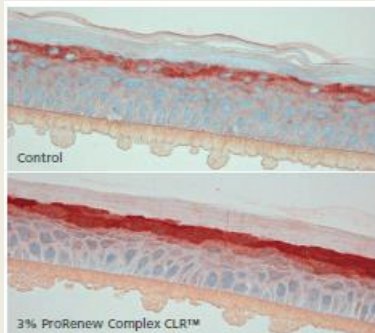
**Treated keratinocytes show clear activation of gene expression of essential markers of the differentiation process.**

A result that supports the **contribution of ProRenew Complex CLR in quality of the epidermal renewal processes.**

### 2. Caspase-14

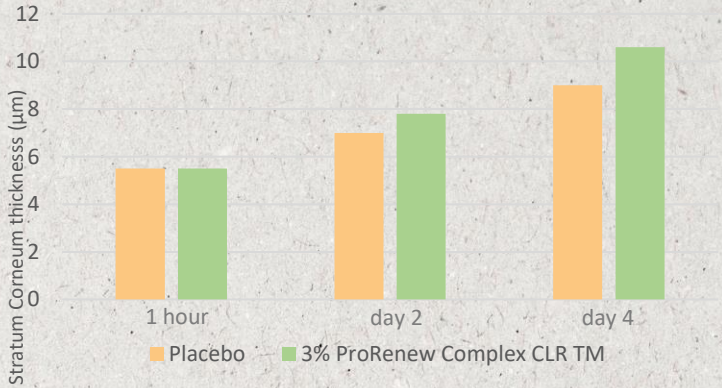
Treatment of the growing epidermal skin model with 3% ProRenew Complex CLR™, for 14 days, led to **activation in the production of caspase-14.**

***Caspase-14 is important for the maintenance of normal and healthy keratinocyte differentiation, cornification and architecture of stratum corneum***



## Clinical efficacy

Acceleration of skin renewal

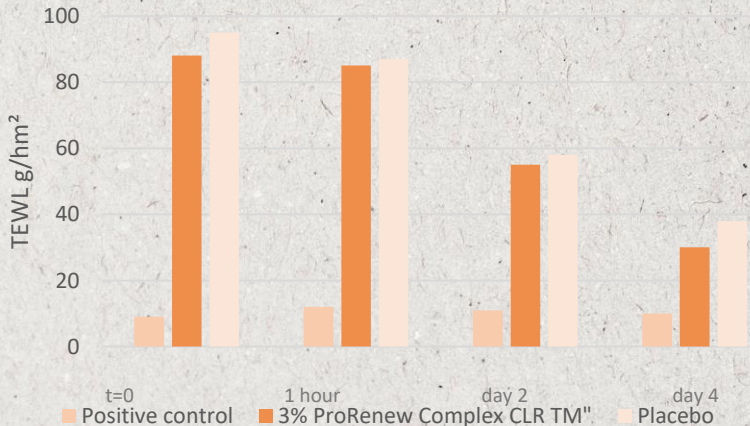


### 3. Acceleration of skin renewal

5 female volunteers (47–63 years old) applied twice daily test products on the inner forearm, for 2 weeks. After that, tape stripping was performed to remove stratum corneum and induce skin damage.

By measuring the thickness of the stratum corneum 1 hour, 2 and 4 days after tape stripping it was shown **that the skin treated with ProRenew Complex CLR™ had a clearly accelerated rate of skin renewal.**

Stimulation of barrier recovery



### 4. Stimulation of barrier recovery

The treated skin clearly showed an **increased rate in the recovery of a healthy barrier function** of the skin after tape stripping